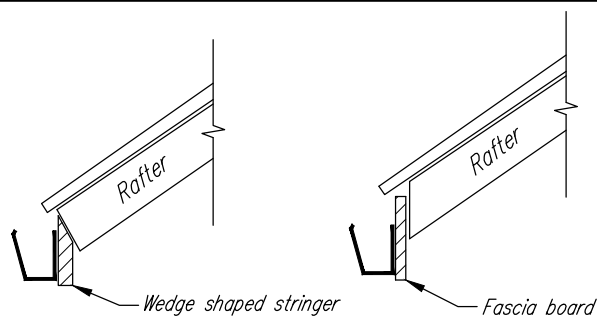
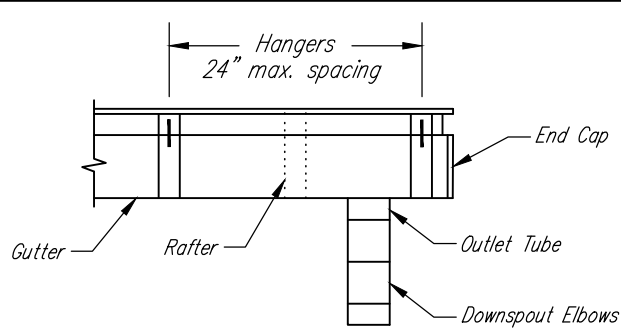


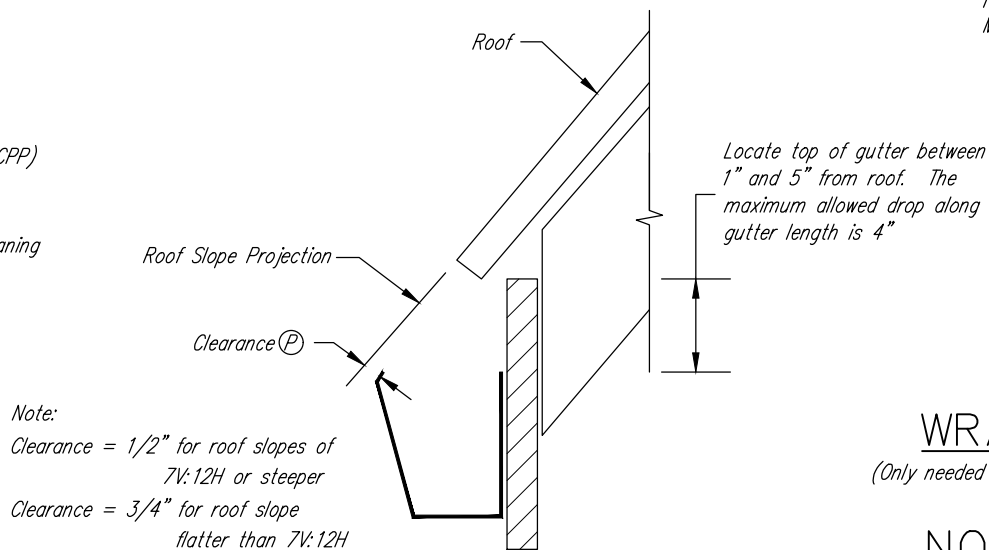
GUTTER AND DOWNSPOUT DETAIL



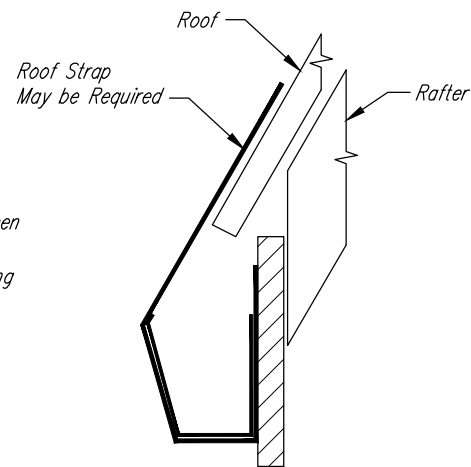
FASCIA AND STRINGER DETAIL



FRONT VIEW



CLEARANCE DETAIL



WRAP-AROUND STRAP

(Only needed when clearance of roof slope projection can not be met)

NOTES

1. Gutter must be corrosion resistant material of sufficient thickness to prevent flexing between supports. Aluminum gutters must have a nominal thickness of 0.032 inches. Aluminum downspouts will have a nominal thickness of 0.020 inches. Galvanized steel gutters will have a minimum thickness of 28 gauge. All gutters must have end caps.
2. Dissimilar metals must not be in contact with each other.
3. Gutters must have continuous backing support with a vertical face. A wedge shaped stringer may be used for support. Rafter ends and fascia boards must be sound. Fascia board material to be spruce, pine, fir or better. Cover non-pressure treated boards with aluminum flashing or exterior paint prior to installation of roof gutter.
4. Locate gutter hangers a maximum of 24 inches apart and attach to fascia board or roof sheathing at rafter locations.
5. Securely fasten downspouts at the top and bottom with support brackets and place intermediate supports brackets at a maximum spacing of 10 feet where not housed within a protective sleeve.
6. Make all gutter joints watertight with mastic or caulking.
7. Use expansion joints on straight runs of 40 feet or more and where the gutter system is not free floating. If gutters are seamless follow the manufacturer's recommendations.
8. Place gutters below the roof slope line projection with a minimum clearance as shown in the drawings.
9. Place a protective sleeve of PVC Sch. 40 or steel pipe around the downspout if exposed to machinery traffic or livestock. Sleeve will be a minimum height of 6 feet above grade.

Roof Gutter and Downspout Schedule

Roof Number	Fascia Board (A) X" x X"	Gutter Size (B) (in)	Gutter Length (ft)	Total Slope ft./100 ft. (C)	Wrap-around Strap Spacing (ft)	Downspout (Number)	Downspout Size (D) X" x X" or Diameter (in)	Riser Length Above Ground (E) (ft)	Riser Length Below Ground (F) (ft)	Riser Unit Dia. (G) (in)	Outlet Pipe Slope (H) (%)	Outlet Pipe Elbow Elev. (I) (ft)	Riser Stub Length (J) (ft)	Conduit Length (K) (ft)	Outlet Pipe Length (L) (ft)	Outlet Invert Elev. (M) (ft)	Outlet Section Dia. (N) (in)	Clearance (P) (in)
#1																		
#2																		
#3																		
#4																		
#5																		

I certify the gutter and downspout type, size, gauge, roof gutter slope and mounting method are as shown on the plans and specifications.

NRCS is accepting the construction of this gutter and downspout system on the basis that they have been certified by a licensed builder as being installed as shown on the plans and specifications. Any deficiencies in the construction is the responsibility of the licensed builder whose signature appears on the construction drawings.

MICHIGAN ENGINEERING STANDARD DRAWING	
FILE NAME	MI-012-B 3-18
STANDARD DWG. NO.	MI-012-B
DATE	3-18
SHEET	1 OF 1

Contractor Signature	Date
License Number	Exp. Date

NRCS Representative	Date
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Not to Scale

Date	
Designed	
Drawn	
Checked	
Approved	

K-Style Gutter and Downspout Detail Underground Outlet	Co., Michigan
	Township, T. -R., Sec.



File Name	
Drawing Name	
Sheet	of